

Springfield CSO Controls – In-Place or In-Progress

Gray Infrastructure

- Storage
 - In-Line
 - Off-Line
- Pump Station Capacity Increase
- Maximizing Flow to the WWTP
- Increase Secondary Treatment Capacity

Green Infrastructure

- Various Green Practices

Sewer Separation

Springfield CSO controls in-place or in-progress cont.

- CSO 04:
 - Increased Hydraulic Capacity of Pump Station = 10 MGD
 - Revised Overflow Volume = 0
- CSO Area 01:
 - Off-Line Storage = 2MG
 - Revised Overflow Volume = 2.2 MG – 2.0 MG = 0.2 MG
- CSO Area 02:
 - Total sewer Separation in progress
 - Revised Overflow Volume = 2.8 MG, No change
- CSO Area 03:
 - Green Infrastructure in place = 0.5 MG
 - Regulator 03 Capacity Increase in progress = 10 MGD
 - Net decrease in overflow volume = 0.5 MG due to GI
 - Revised Overflow Volume = 2.1 MG – 0.5 MG = 1.6 MG
- WWTP
 - Adding 2.0 MGD Chemically Enhanced Bio-Actiflow Unit in progress
 - No Blending

Springfield CSOs due to 1 inch. four hour rainfall

01

Before CSO controls
overflow volume = 7.35
MG

02

Total revised overflow
volume due to partial
controls in-place = CSO
04 + CSO Area 01 + CSO
Area 02 + CSO Area 03 =
0.0 MG + 0.2 MG + 2.8
MG + 1.6 MG = 4.6 MG

03

Reduction in CSO
Volume = 7.35 MG – 4.6
MG = 2.75 MG



Conversation



Next Steps

- Based on this concept develop a CSO event and CSO volume modeling tool
 - Excel spreadsheet-based template
 - Guidance – How to use the template
- Similar to LTCP-EZ and Green LTCP-EZ Template